STUDENT SUPPORT SERVICES AND STUDENT SATISFACTION IN ONLINE EDUCATION

Kutlay M. Erdil
North Cyprus
kutlayerdil@hotmail.com

ABSTRACT

This paper investigates the relationship between quality of support services in online education and the level of satisfaction of e-learners with these services.

Case study was employed to measure University of Surrey's virtual MBA students' satisfaction with course facilitator, personal tutor and help desk functions designed for online education. The research revealed strong positive correlation between quality attributes of these support services and overall level of satisfaction with the support services. It suggests that any increase in quality level of services would yield high satisfaction. Satisfaction gap analysis, on the other hand, indicated that certain aspects of the service functions are not performing to the full satisfaction of students.

It is, therefore, concluded that designing academic and administrative support services in conformity with virtual students' needs will better encourage success of e-learners.

Keywords: student support services, satisfaction, quality, e-learners, online education

INTRODUCTION

The convenience of online education mostly attracted working adult students who needed to have an education in ways that meet their schedules and demands of working, family and social lives. However, learning within these responsibilities is not easy where major problems reported by students are the feelings of isolation, lack of self-direction and management, and eventual decrease in motivation levels (Ludwig-Hardman & Dunlap, 2003).

According to Eastmond, (2000), student success in Web-based degree programmes depends on an individual's course learning experience as well as the academic and administrative services provided by a virtual institution throughout the degree. These are basically online student support services that include: tutorials (discussions) between student-tutor and student-student, tutor support, help-desks, counselling and advising, technical support, and many others. However, providing these services do
not guarantee success unless they are designed according to students' needs and therefore their satisfaction.

LITERATURE REVIEW

Problems and needs when studying online

There can be little doubt that adult students are demanding flexibility in the provision of online education. However, the flexibility in terms of time of access and choosing the place to study might lead to problems with e-courses; the need for high levels of motivation and time management skills for busy learners to keep up with the course. It is very likely for them to fall behind of the course which triggers the drop-out rates.

Another concern of online education is learners today are not only trying to master the subject, but also trying to cope with: 1) mastering a potentially complex assortment of software tools 2) developing new study habits to make effective use of these tools (Eisenstadt & Vincent, 1998) and 3) knowing how to access online academic resources. These definitely signal a need for technical and 'know how to search' support.

The shift from face-to-face to written communication obviously has put more emphasis on to written instructions detailing programme regulations, etc. Unclear instructions would confuse learners as in the experience of one student who commented that instructors were not clear, and they didn't know what they were supposed to be doing (Mason, 1998).

Furthermore, there could be students with lack of self-confidence, poor learning skills and a considerable anxiety and fear of further fail which calls for a counselling and advising support.

Student Support Services

Simpson, (2002) defined student support in the broadest terms as all activities beyond the production and delivery of course

materials that assist in the progress of students in their studies. Support systems include tutorials, technical support, access to library and information services, advising-counselling, peer support and etc.

- *Electronic Tutorial Support*

Since distance students often report a feeling of isolation it is crucial to have online problem and discussion sessions, known as 'tutorials'. According to Eisenstadt & Vincent (1998), benefit to students is partly academic; the tutorial is an important social focus that allows students to build relationships with their instructors and other students.

- *Tutor Support (or Course Facilitator)*

Within an online course, the instructor may be perceived as inaccessible when they do not respond in timely fashion desired by the student (Howland & Moore, 2002). One solution could be having virtual hours (*e-Office Hours*) (preferably after 6pm) and days for students to contact the instructor via e-mail, telephone, and/or chat rooms.

- *Help Desks and Technical Support*

The most common practice is to have an online 'help desk' available to students for all times where support personnel can reply through e-mail or chat mode to enquiries like password and access problems.

- *Online Counselling (or Personal Tutor)*

Counselling services give advice and information to students on a wide range of educational, financial and practical issues.

Quality of Student Support Services

According to Simpson (2002), there is clearly little point in providing a student support service unless the quality of service is appropriate and valued by students. Kotler (1994) defined *quality* as the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

Parasuraman et al. (1985) proposed ten dimensions (which then reduced to five) to measure service quality (SERVQUAL): Reliability, Responsiveness, Competence, Access, Courtesy, Communication, Credibility, Security, Understanding / Knowing the customers and Tangibles. According to them, service quality is a function of the differences between expectation and performance along the quality dimensions.

This study examined; responsiveness, assurance and communication dimensions in measuring quality attributes of Course Facilitator, Help Desk and Personal Tutor.

Responsiveness – willingness to help students and provide prompt service.

The ability of the Internet to provide 24 hours 7 days communication has raised the expectation of working adults racing with time, to get immediate reply for their enquiries.

Assurance – knowledge and courtesy of tutors/ staff and their ability to inspire trust and confidence.

The lack of face-to-face interaction puts more emphasis on both the style and content of the written communication.

Communication – providing convenient access at convenient times and keeping students well informed from services, procedures and from any other raising issues.

Student Satisfaction

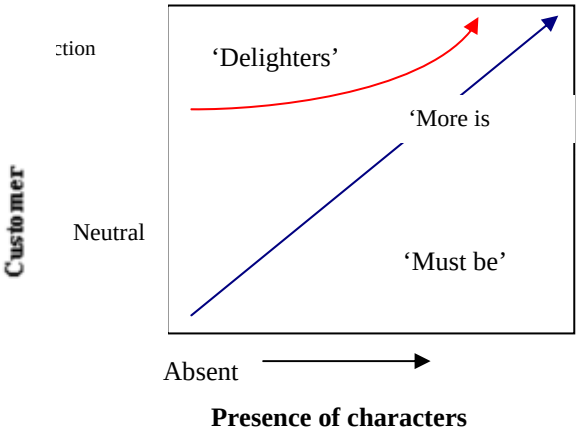
Studies have shown that student satisfaction have a positive impact on student motivation, student retention, and recruiting efforts (Elliott & Shin, 2002). According to Oliver (1980) customer satisfaction or dissatisfaction results from experiencing a service quality encounter and comparing that encounter with what was expected. Students generally form their expectations through their previous education experiences, while searching information about the institution, and discussing with other people who have been studying there, etc. Moreover, student satisfaction is being shaped continually by repeated experiences in the learning environment (Elliott & Shin, 2002). Since, online education is relatively a new experience for most of the learners, new needs will arise during the learning process. Suppose a student whose first time to take an e-course. Her/his initial needs and therefore satisfaction would keep changing throughout the course.

Oliver (1993) proposed a model to integrate the satisfaction and the service quality dimensions. He proposes that while service quality is formed by a comparison between ideals and perceptions of performance regarding quality dimensions, satisfaction is function of disconfirmation of predictive expectations regarding both quality and non-quality dimensions. And it is possible to be satisfied with low quality if the performance meets and exceeds one's prediction of performance (Oliver, 1993). Therefore, care should be given to identify changing needs and what is important to students.

Satisfaction level

In order to understand the concept of satisfaction the Kano model (see figure 1) is used which separates characteristics that

cause dissatisfaction, satisfaction and delight (Jobber, 2001). These characteristics underlie the model: 'must be', 'more is better' and delighters.



Source: Jobber. 2001

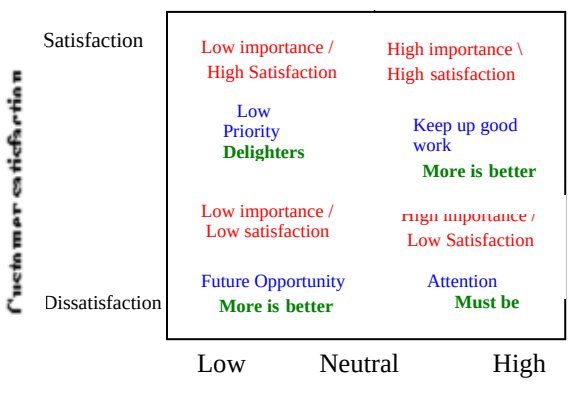
Figure 1: The Kano Model

'Must be' characteristics are expected to be present and are taken for granted. For example, students expect well-designed course content. Lack of this causes annoyance (dissatisfaction) but its presence only brings dissatisfaction up to a neutral level (not leads to satisfaction).
'More is better' characteristics lead to satisfaction if fulfilled or exceeded and lead to dissatisfaction if not fulfilled. For example, a prompt answer lead to satisfaction but delays would lead to dissatisfaction.
'Delighters' are the unexpected characteristics that surprise the customer. Their absence does not cause dissatisfaction but their presence delights the customer (increase satisfaction). These are the factors to stand out from the competition. For example, offering extra free short online courses can delight the student.

Measuring Satisfaction with respect to importance of attributes

As Rowley (1997) said, it is important to recognize the essential dimensions of quality but also to seek to identify which items are more important to students, and therefore are most likely to have an impact on their overall satisfaction. Importance - satisfaction grid is used below for depicting students' priorities along with their satisfaction levels. This analysis also supports the notion of the *satisfaction gap* (Long et al, 1999) known as the difference between each student's varying degree of satisfaction (S) with each attribute and the relative importance (I) of each attribute. The satisfaction gap (S - I) - shows how well the institution is performing according to students' needs. Minus values would indicate the institution is not completely fulfilling/ satisfying needs of students that are considered to be important. On the other hand, positive gap values would indicate that the institution is successfully satisfying/ fulfilling the needs important to students.

The Importance and Satisfaction Grid



Source: Modified from Martilla & James, 1977; Guolla, 1999; Jober, 2001; O'Neill et al, 2001; Noel-

Gaolia, 1999; Jobe, 2001; O'Neill et al. 2001; Noel Levitz, 2002; Matzler, 2003

Figure 2: The importance and satisfaction grid

High importance / high satisfaction: showcases the institution's areas of strengths.

High importance / low satisfaction: pinpoints areas that need immediate attention.

Low importance / high satisfaction: presents items with 'low priority' action.

Low importance / low satisfaction: suggests an opportunity to improve areas since they have low satisfaction and therefore delight students to stand out from the competition.

RESEARCH SETTING

This study employed case study to explore the satisfaction level of virtual MBA students with support services provided by Business School of University of Surrey in UK. The target population was set to be students enrolled to virtual MBA programme. Online questionnaire was developed and presented on the notice board to collect data from all students in ten days in August 2003.

Research Hypothesis set to be as follows:

There is a relationship between the quality of online student support services and the level of satisfaction of students with these services

First, respondents were asked to indicate the level of importance for each item measuring quality attributes of three support functions. Five-point Likert scale was anchored at (1) not important at all to (5) very important. Then respondents were asked to rate their satisfaction level for the same items (worded slightly different). Five-point Likert scale was anchored at (1) not satisfied at all to (5) very satisfied.

Before running the questionnaire the pilot study was conducted and necessary amendments were made. Validity of the research also confirmed. Reliability analysis, on the other hand, revealed an alpha coefficient of .92 for items measuring importance level and an alpha coefficient of .91 for items measuring satisfaction level for the same items.

Correlation analysis (SPSS) was used to test if there is a significant relationship between the quality of support services and the level of satisfaction of students with these services.

DATA ANALYSIS

Nineteen virtual students completed the survey, for a response rate of 16%. Although, the response rate is very low, it was expected due to the online administering of the questionnaire. All questionnaires were valid with non-missing values and analysed.

Satisfaction Gap Analysis

Following table presents satisfaction gaps calculated by subtracting importance values from satisfaction scores.

Table 1: Support Services

Course Facilitator	Mean Importance	Mean Satisfaction	Satisfaction Gap (S - I)
Easy contact with the course facilitator.	4.32	3.47	-0.84
Willingness of the course facilitator to help.	4.58	3.63	-0.95
Being informed clearly of the course facilitator's responsibilities.	4.16	2.79	-1.37
Having prompt answers from course facilitator.	4.37	3.42	-0.95
Competent			

course facilitator.	4.21	3.42	-0.79
Approachable course facilitator.	4.00	3.26	-0.74
Mean	**4.27**	**3.33**	**-0.94**
Help Desk			
Help desk available at convenient times.	4.47	3.00	-1.47
Readiness of staff at Help Desk to help students.	4.58	3.74	-0.84
Ability of the staff to manage queries.	4.53	3.63	-0.89
Receiving quick and reasonable response from Help Desk.	4.53	3.26	-1.26
Having pleasant and courteous replies.	3.74	3.84	0.11
Mean	**4.37**	**3.49**	**-0.87**
Personal Tutor (Facilitator)			
Being informed explicitly of the personal tutor's responsibilities.	4.16	2.68	-1.47
Having knowledgeable personal tutor.	4.26	3.32	-0.95
Having quick replies from personal tutor.	4.32	3.26	-1.05
Having personal tutor who is caring and supportive.	4.05	3.37	-0.68
Mean	**4.20**	**3.16**	**-1.04**

Personal tutor recorded the largest gap with -1.04, following with course facilitator -0.94 and help desk -0.87. For personal and course facilitators; 'being informed clearly of the roles' and for HD; 'help desk available at convenient times' had highest negative gaps.

Table 2: Quality Attributes

Responsiveness Importance	Mean	Resposiveness Satisfaction	Mean	Satisfaction Gap (S - I)
Q2. Willingness of the course facilitator to help.	4.58	Q17. Readiness of the course facilitator to help.	3.63	
Q4. Having prompt answers from course facilitator.	4.37	Q19. Receiving quick answers from course facilitator.	3.42	
Q8. Readiness of staff at Help Desk to help students.	4.58	Q23.Willingness of the staff to help learners.	3.74	
Q10. Receiving quick and reasonable response from Help Desk.	4.53	Q24. Having prompt replies from Help Desk.	3.26	
Q14. Having quick replies from personal tutor.	4.32	Q29. Having prompt answers from personal tutor.	3.26	
Mean	**4.47**	**Mean**	**3.46**	**-1.01**
Assurance Importance	**Mean**	**Assurance Satisfaction**	**Mean**	**Satisfaction Gap (S - I)**
Q5. Competent course facilitator.	4.21	Q20. Having competent course facilitator.	3.42	
Q9. Ability of the staff to manage queries.	4.53	Q24. Capability of the staff to manage queries.	3.63	
Q11. Having		Q26. Having		

pleasant and courteous replies.	3.74	friendly and kind responses.	3.84	
Q12. Having knowledgeable personal tutor.	4.26	Q28. Availability of a competent personal tutor.	3.32	
Q15. Having personal tutor who is caring and supportive.	4.05	Q30. Having personal tutor who is caring and supportive.	3.37	
Mean	4.16	**Mean**	3.52	**-0.64**

Communication Importance	**Mean**	**Communication Satisfaction**	**Mean**	**Satisfaction Gap (S - I)**
Q1. Easy contact with the course facilitator.	4.32	Q16. Being able to contact easily to the course facilitator.	3.47	
Q3. Being informed clearly of the course facilitator's responsibilities.	4.16	Q18. Being informed explicitly of the facilitator's role.	2.79	
Q6. Approachable course facilitator.	4.00	Q21. Having an approachable course facilitator.	3.26	
Q7. Help desk available at convenient times.	4.47	Q22. Availability of Help Desk at times when needed.	3.00	
Q12. Being informed explicitly of the personal tutor's responsibilities.	4.16	Q27. Being informed clearly of the personal tutor's role.	2.68	
Mean	**4.22**	**Mean**	**3.04**	**-1.18**

Communication dimension had the largest negative satisfaction gap, following with responsiveness – 1.01 and assurance – 0.64.

Hypothesis Testing

Satisfaction scores for each function were computed by averaging respondent's level of satisfaction scores along items making up each support service. An overall measure of satisfaction was then computed by averaging scores across three support services (hereby computed overall satisfaction). Pearson product-moment correlation was then run to test the hypothesis.

Correlations

		Help Desk	Course Facilitator	Personal Tutor	Overall measure of satisfaction with support services (computed)
Help Desk	Pearson Correlation	1	-.025	.112	.500*
	Sig. (2-tailed)	.	.920	.647	.029
	N	19	19	19	19
Course Facilitator	Pearson Correlation	-.025	1	.750**	.799**
	Sig. (2-tailed)	.920	.	.000	.000
	N	19	19	19	19
Personal Tutor	Pearson Correlation	.112	.750**	1	.863**
	Sig. (2-tailed)	.647	.000	.	.000
	N	19	19	19	19
Overall measure of satisfaction with support services (computed)	Pearson Correlation	.500*	.799**	.863**	1
	Sig. (2-tailed)	.029	.000	.000	.
	N	19	19	19	19

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3: Correlation Table

As can be seen from Table 3; help desk, course facilitator and personal tutor are making strong, positive and significant contribution (r=.50 r=.80, r=.86; $p<0.05$) to the overall satisfaction with these support services. Hence, there is a relationship between the quality of online student support services and the level of satisfaction of students with these services. The result suggests than any changes in the quality level of support services will positively affect satisfaction level such that improvements would cause high level of satisfaction.

CONCLUSION

This study first aimed to identify student support services and then to measure satisfaction of virtual students with the quality of these services.

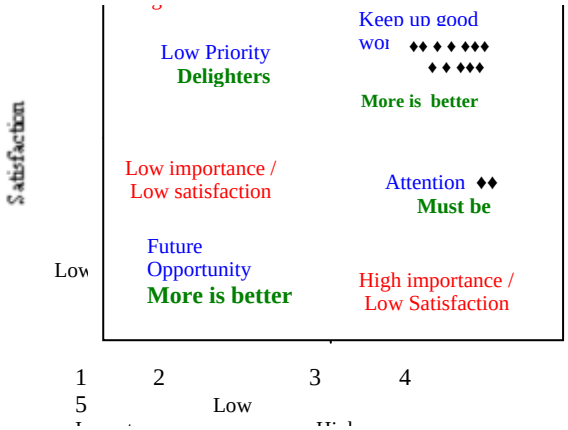
The importance – satisfaction grid and satisfaction gap analysis were also used in order to better recognize the degree of importance given to each quality attribute of student support experience as well as the learner's varying degree of satisfaction with each attribute.

Table 4: The importance - satisfaction grid analysis

High

Low importance / High Satisfaction

High importance \ High satisfaction



Source: Modified from Martilla & James, 1977; Guolla, 1999; Jober, 2001; O'Neill et al. 2001; Noel-Levitz, 2002; Matzler, 2003

In analysing the importance-satisfaction grid, it can be observed that most of the scores plotted from Table 1, were clustered around High importance / High satisfaction region. These are also 'more is better' items that lead to satisfaction if fulfilled and exceeded and lead to dissatisfaction if not fulfilled (Matzler et al., 2003). Therefore, the institution needs to 'keep up good working'. However, when the satisfaction gaps were analysed (see Table 1) negative signs showed that certain aspects of the service functions are not performing to the full satisfaction of students. Hence, more work is required to meet and satisfy those needs where designing academic and administrative support services in conformity with virtual students' needs will better encourage their success.

The following two factors were recognized in the high importance / low satisfaction region. Since they are in the high importance region, they must be dealt with immediately.

Table 5: Must Be Items

MUST BE	Mean Importance	Mean Satisfaction	Satisfaction Gap (S - I)
Being informed clearly of the course facilitator's responsibilities.	4.16	2.79	-1.37
Being informed explicitly of the personal tutor's responsibilities.	4.16	2.68	-1.47

Mainly; there is a lack of adequate information regarding personal and course tutor's roles. These are also 'must be' characteristics that cause dissatisfaction if not fulfilled but do not lead to satisfaction if fulfilled (Jobber, 2001).

In conclusion, University of Surrey's, Business School support services are doing well with few deficiencies. The relationship between quality of support services and overall satisfaction with support services revealed strong large correlation (see Table 3). So, it is important to keep the quality of each service up.

LIMITATIONS

The first and most important limitation of this study is the very small sample size which can induce small sample error. Second most important limitation is the frequency of contact with the support services. Since, contact option was not measured or controlled; this could have a significant impact on satisfaction with services.

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